In the Drawings:

Please replace drawing sheet number 1, having Fig. 1, with the first included replacement sheet having an amended Fig. 1.

Please replace drawing sheet number 3, having Fig. 3, with the second included replacement sheet having an amended Fig. 3.

REMARKS

Claims 1-32 are pending in this application. The Applicant has previously elected claims 1-12 and withdrawn claims 13-31, without prejudice. Applicant presents a new claim, claim 32, for examination.

In the Office action dated December 17, 2004, the Examiner rejected claims 1-12 as being anticipated by *Mujerki*, or *Mujerki* combined with *Nicewarner Jr., et al.* Applicant argues for traversal of the rejections. Applicant also presents amendments to the specification and drawings in response to the examiners objection to the drawings.

Regarding the Objection to the Drawings

Applicant has amended Fig. 1 and its description to remove a duplicate use of reference numeral 42, which was used to describe both "inter-flex contacts" (Page 10) and "upper flex contacts" (Page 12). The "inter-flex contacts" of Fig. 1 are now referenced with 43 thus preserving number uniqueness.

Applicant has amended Fig. 3 to show more detail of the flex circuit 32 under the depicted contacts 28, the flex circuit having upper flex contacts 42 and lower flex contacts 44. The details are present in the as-filed application in Figs. 4-5 and their written description, so no new material has been added. Applicant respectfully submits that the amended Fig. 3 shows the upper flex contacts 42 and lower flex contacts 44 together as requested by the examiner. Applicant requests that the objection to the drawings be withdrawn.

Regarding the Claim Rejections Under 35 U.S.C § 112

The Examiner rejected claim 9 as being indefinite under § 112 for failure to distinctly claim the subject matter which the applicant regards as his invention. The examiner indicated that it is unclear whether the language "expresses an n-bit

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datapath" and "expresses a 2n-bit data path" are inherent to the structure or if they are new limitations. Applicant responds that they are meant to be limitations – but they are not limitations without structure as suggested by the Examiner. The structure that "expresses" the recited datapath in each case is a data set of CSP contacts. The language "expresses an x-bit data path" is further descriptive of the "data set" of CSP contact structure already recited.

For example, a typical memory CSP will have a set of n contacts, each contact expressing 1-bit, that expresses an n-bit datapath. In such case, the set of n contacts is the "data set". Often, such structure is simply referred to as a datapath, which is a structure. Applicant's claimed structure is not limited, however, to a scheme with one bit per contact, and may cover other schemes (which are not used in common memory circuits) in which a CSP contact may express more than one bit.

Applicant respectfully submits that the claim language is sufficiently definite and requests withdrawal of the Section 112 rejection of claim 9.

The examiner rejected claims 11 and 12 as being unclear as to what "on-pad vias" and "off-pad vias" mean. Applicant has amended claims 11 and 12 to say "on-contact" and "off-contact", which more clearly points out the connection of the flex contacts to the first conductive layer. Applicant respectfully submits that the amended claims are clear and respects the rejection be withdrawn.

Regarding the Claim Rejections under 35 U.S.C. § 102

The Examiner rejected Claims 1 and 3-6 under 35 U.S.C. § 102(e) as anticipated by *Mukerji*. Applicants respectfully traverse the rejection of claims 9-11 at least because *Mukerji* does not teach a "a form standard disposed between the first and second CSPs". The Examiner has rejected these claims based on certain characterization of the teachings of *Mukerji*. Applicants respectfully disagree with the

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Examiner's characterization of the teachings of *Mukerji* .

Specifically, the Examiner characterizes mask 512 of Fig. 5 as a form standard. Mask 512 is described in *Mukerji* with respect to Fig. 5 and Fig. 3 (*Mukerji*, col. 4, ll. 54-67). *Mukerji* notes that mask 512 "can be similar" to mask 310 of Fig. 3. (*Id.*, col. 4, ll. 59-64). Fig. 3 and related description of mask 310 provide, "[m]ask 310 prevents trace 125 from directly contacting chip 341 in order to ensure that trace 125 does not improperly electrically bias device 301." (*Id.*, col. 4, II. 19-22). That portion of *Mukerji* further notes that, "[m]ask 310 can be comprised of conventional masking materials and is preferably disposed onto trace 125 before the bending or folding of substrate 120." (*Id.*, col. 4, ll. 22-24). Thus, unlike the Examiner's characterization of teachings of *Mukerji*, the relevant portions of *Mukerji* merely teaches the use of a mask to prevent trace 125 from directly contacting with chip 341.

In contrast, claims 1, 4, and 6 recite a "form standard." Consistent with Applicants claimed embodiments, a form standard is preferably a "mandrel that may mitigate thermal accumulation while providing a standard sized form about which flex circuitry is disposed." Applicants respectfully submit that *Mukerji* does not teach the recited subject matter of claims 1, 4, and 6 because it fails to teach a "form standard." The mask 512 of *Mukerji* is a flexible layer attached to the substrate, and as such it may not provide standard sized form. The *Mukerji* mask is merely a mask layer similar to, for example, the Applicants depicted outer layer 50 in depicted in Applicant's Fig. 5. There is no teaching in *Mukerji* that indicates use of mask 512 as a form standard. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 1 and 3-6 under 35 U.S.C. § 102(e).

Claim Rejections Under 35 U.S.C. § 103

With respect to the rejection of claims 2 and 7-12 under 35 U.S.C. § 103(a) as obvious over *Mukerji* in view *Nicewarner*, Applicants respectfully submit that the

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rejection should be withdrawn because the Office Action does not set forth a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. MPEP § 2143; In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants respectfully submit that there is no *prima facie* case of obviousness because the references do not teach or suggest all the claim limitations. This is because, as discussed above with respect to claim 1, *Mukerji* does not teach what the Office Action sets forth as its teachings. In particular, *Mukerji* teaches the use of a mask to prevent trace 125 from directly contacting with chip 341. According to *Mukerji*, this ensures that "trace 125 does not improperly electrically bias device 301."

Mukerji does not teach or suggest, however, "a form standard disposed between the first and second CSPs" and "flex circuitry connecting the first and second CSPs and disposed to place a first portion of the flex circuitry beneath the lower major surface of the first CSP and a second portion of the flex circuitry above the form standard disposed between the first and second CSPs" as recited in claim 2. Thus, a rejection of claim 2 using *Mukerji* in combination with *Nicewarner* is improper.

Moreover, *Nicewarner* does not cure the deficiencies of the teachings of *Mukerji*. In particular, *Nicewarner* does not teach or suggest "a form standard disposed between the first and second CSPs." Thus, even if combined with *Mukerji* (which it cannot be), *Nicewarner* does not teach or suggest the subject matter

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recited in claim 2. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 2 for at least these reasons.

With regard to claim 7 and its dependent claim, as argued above, *Mukerji* does not teach or suggest Applicant's claimed form standard. Further, there is no teaching in *Nicewarner* to cure such deficiency. Applicant therefore requests that the rejection be withdrawn and claim 7 allowed together with its dependent claims.

Double Patenting Rejection

Concerning the double patenting rejection, Applicants respectfully provide herewith a terminal disclaimer in compliance with 37 C.F.R. § 1.321. Applicants respectfully submit that the filing of terminal disclaimer overcomes the double patenting rejection of claims 1, 2, 3, 6, 7, 8, 9, 10, 11 and 12. Applicants further reserve the right to withdraw the terminal disclaimer in case the provisional rejection of these claims is not made final.
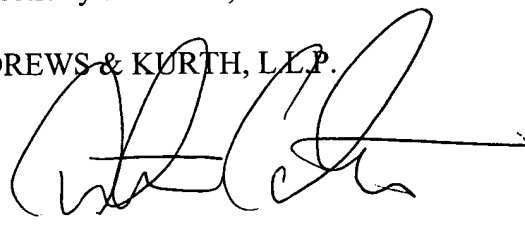
Respectfully submitted,

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